### PROJECT DESCRIPTION

#### **GENERAL**

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 2 (GOVERNOR RITCHIE HIGHWAY) AND EARLEIGH HEIGHTS ROAD/MAGOTHY BRIDGE ROAD) IN ANNE ARUNDEL COUNTY, MARYLAND. MODIFICATIONS INCLUDE THE INSTALLATION OF 16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEADS AND AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTONS FOR THE SOUTH LEG OF MD 2 AND THE WEST LEG OF EARLEIGH HEIGHTS ROAD. MD 2 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

#### INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA SIX-PHASE, SEMI-TRAFFIC-ACTUATED MODE WITH THE MD 2 APPROACHES OPERATING CONCURRENTLY AND THE EARLEIGH HEIGHTS ROAD/MAGOTHY BRIDGE ROAD APPROACHES OPERATING SPLIT PHASED. PROTECTED LEFT-TURN PHASING IS PROVIDED FOR NORTHBOUND AND SOUTHBOUND MD 2.

NEW ALTERNATED AUDIBLE PUSHBUTTON ACTUATED PEDESTRIAN PHASES WILL BE PROVIDED ACROSS THE SOUTH LEG OF MD 2 AND THE WEST LEG OF EARLEIGH HEIGHTS ROAD.

APS MESSAGE FOR CROSSING AT THE SOUTHEAST CORNER OF MD 2 (GOVERNOR RITCHIE HIGHWAY):

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS GOVERNOR RITCHIE AT MAGOTHY BRIDGE, WAIT".
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

APS MESSAGE FOR CROSSING AT THE SOUTHWEST CORNER OF MD 2 (GOVERNOR RITCHIE HIGHWAY):

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS GOVERNOR RITCHIE AT EARLEIGH HEIGHTS, WAIT".
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

APS MESSAGE FOR CROSSING EARLEIGH HEIGHTS ROAD:

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS EARLEIGH HEIGHTS AT GOVERNOR RITCHIE, WAIT".
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

#### CONTROLLER REQUIREMENTS

THE EXISTING NEMA SIZE '6' BASE MOUNTED CABINET AND EIGHT-PHASE CONTROLLER AND ALL ASSOCIATED EQUIPMENT WILL CONTINUE TO BE USED. A 2-WIRE CENTRAL CONTROL UNIT WILL BE ADDED TO THE CABINET.

### EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA:

QUANTITY UNIT ITEM NO.

9570 [UPDATED] SHEET ALUMINUM GROUND MOUNTED SIGN

- 4 EACH R10-3(1) (9"x15")

- 4 EACH W11-2 (30"x30")
- -2 EACH W16-7p(R) (24"x12")
- -2 EACH W16-7p(L) (24"x12")

### PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. KIMBERLY TRAN ASSISTANT DISTRICT ENGINEER - TRAFFIC PHONE: (410) 841-1019

MR. JOHN MAYS ASSISTANT DISTRICT ENGINEER - MAINTENANCE PHONE: (410) 841-1013

MR. ED RODENHIZER SUPERVISOR - SIGNAL SHOP PHONE: (410) 787-7650

MR. MIKE HUBER ASSISTANT DISTRICT ENGINEER - UTILITY PHONE: (410) 841-1039

MR. RICHARD L. DAFF CHIEF, TRAFFIC OPERATIONS DIVISION PHONE: (410) 787-7630

## EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	<u>UNIT</u>	DESCRIPTION
2002	2	CY	TEST PIT EXCAVATION
5005	600	LF	12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
8001	4	EA	FURNISH AND INSTALL AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8002	3	EA	FURNISH AND INSTALL BREAKAWAY PEDESTAL POLE - ANY SIZE
8003	4	EA	FURNISH AND INSTALL 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS
8007	200	LF	FURNISH AND INSTALL UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
8008	100	LF	FURNISH AND INSTALL UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8010	65	LF	WOOD SIGN SUPPORTS 4 INCH X 4 INCH
8011	1	EA	ADJUST EXISTING HANDHOLE
8012	250	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8014	2	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8015	37	SF	INSTALL GROUND MOUNTED SIGN
8018	2	EA	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
8020	500	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8021	500	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

#### EQUIPMENT LIST "C"

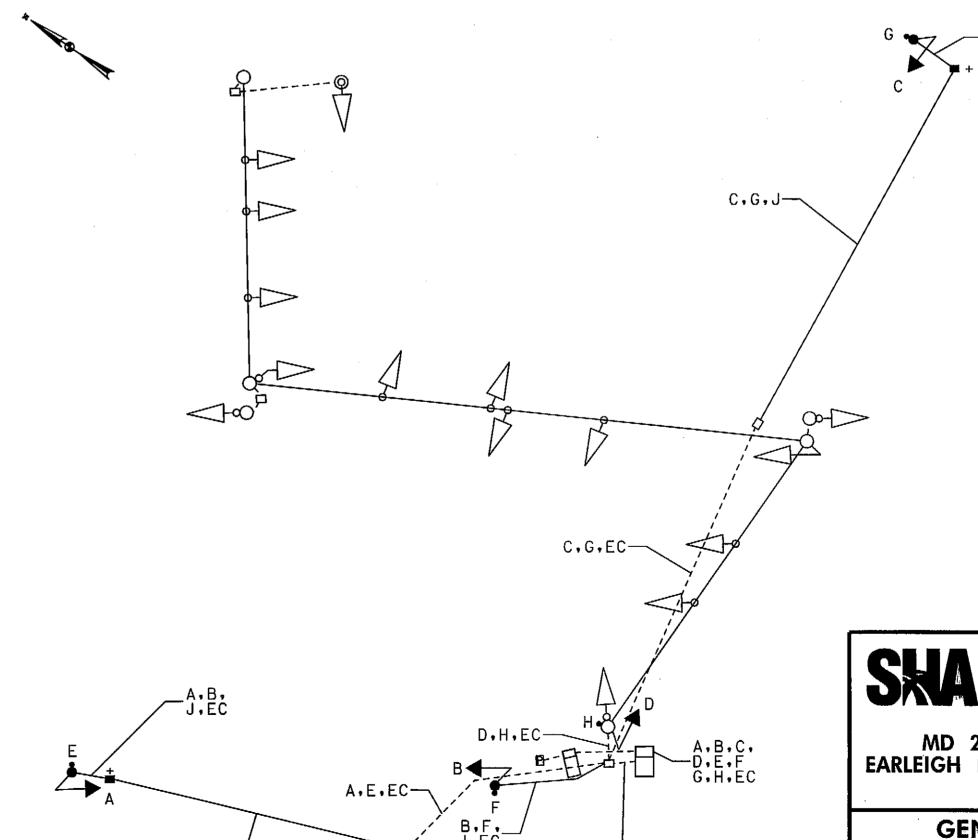
C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA:

NONE.

# PHASE CHART

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	 	22	23
		R Y G	R Y G	R Y			R Y G	R Y G		A Y G	R Y G G	æ>@\$	R Y G	R Y G G	(F) (Y)	(X)	(R V)				

PHASE I + 5	←-G	← G	R	R	G	←G—	<b>←</b> G—	R	R	R	R	R	R	R	R	FL/R	FI /R	FL/Y	FL/Y	DW	DW	DW	DW	<u> </u>
I + 5 CHANGE		L		TO P			PHASE								<u> </u>	1 2/11	1 27 11		1/ 1		5,,			\$ ₹
PHASE I + 6		<b>←</b> G—	G	G	G	—R—	←R—	R	R	R	R	R	R	R	R	FL/R	FL/R	FL/Y	FL/Y	DW	DW	DW	DW	
1 + 6 CHANGE		<b>←</b> Y —	G	G	G	R	←-R	R	R	R	R	R	R	R	R	FL/R	FL/R	FL/Y	FL/Y	DW	DW	D₩	DW	<u> </u>
PHASE 2 + 5	<b>←</b> R−	<b>←R</b>	R	R	Ŕ	<del> </del>	←G—	G	G	R	R	R	R	R	R	FL/R	FL/R	FL/Y	FL/Y	DW	DW.	DW	DW	宁
2 + 5 CHANGE	<b>←R</b>	<del>←R</del>	R	R	R	←Y	<b>←</b> Y—	G	G	R	R	R	R	R	R	FL/R	FL/R	FL/Y	FL/Y	DW	DW	DW	DW	
PHASE 2 + 6	<b>←</b> R—	←R	G	G	G	←R	<b>←</b> R—	G	G	R	R	R	R	R	R	FL/R	FL/R	FL/Y	FL/Y	W	W	D₩	W	]⁺⊲—
PED CLEARANCE	<b>←</b> R—	<b>←</b> R—	G	G	G	<b>←</b> R—	<b>←</b> R	G	G	R	R	R	R	R	R	FL/R	FL/R	FL/Y	FL/Y	FL/DW	FL/DW	DW	DW	
2 + 6 CHANGE	<b>←</b> R—	<b>←-R—</b>	Υ	Υ	Υ	<b>←R</b> —	<b>←</b> R—	Y	Y	R	R	R	R	R	R	FL/R	FL/R	FL/Y	FL/Y	D₩	DW	DW	DW	<b>•</b>
PHASE 3	<del>←</del> R—	<b>←</b> R	R	R	R	<b>←</b> R—	<b>←</b> R—	R	R	R	R	R	<del>C</del> G—	G	<del>၂</del>	FL/R	FL/R	FL/Y	FL/Y	DW	DW	DW	DW	
3 CHANGE	<b>←</b> R-	<b>←</b> R —	R	R	R	<del>←</del> R—	<del>←</del> R—	R	R	R	G	R	Y	Υ	· Y	FL/R	FL/R	FL/Y	FL/Y	DW	DW	DW	DW	]▽  -
PHASE 4	<del>←</del> R—	<b>←</b> R—	R	R	R	<del>← R</del>	<b>←-</b> R	R	R	<b>G</b> —	G	<b>С</b> С—	R	R	R	FL/R	FL/R	FL/Y	FL/Y	DW	DW	DW	D₩	<b>一</b> 个
4 CHANGE	<b>←</b> R—	<del>←</del> R—	R	R	R	<b>←</b> R	<del>← R</del>	Ŕ	R	Y	Y	Y	R	R	R	FL/R	FL/R	FL/Y	FL/Y	DW	DW	DW	DW	4
PHASE 4 ALT	<b>←</b> R <b></b> —	<del>← R</del>	R	R	R	<b>←</b> R —	<b>←</b> R—	R	R	<b>←</b> G—	G	<b>←</b> G	R	R	R	FL/R	FL/R	FL/Y	FL/Y	DW	DW	¥	W	
PED CLEARANCE	<del>← R</del>	<del>←</del> R—	R	R	R	<b>←</b> R—	<b>←</b> R—	R	R	←Ğ—	G	<b>←</b> G—	R	R	R	FL/R	FL/R	FL/Y	FL/Y	DW	DW	FL/DW	FL/DW	
4 ALT CHANGE	<del>←</del> R—	<del>&lt;</del> R−-	R	R	R	<b>←</b> R —	<del>←</del> R—	R	R	Y	Υ	Υ	R	R	R	FL/R	FL/R	FL/Y	FL/Y	DW	DW	DW	DW	14 ◆
PRE-EMPTION	<b>←</b> R—	<del>←</del> R—	R	R	—R→	<del>←R</del> —	<b>←</b> R—	R	R	R	R	R	<del>-</del> 6—	G	←G—	FL/Y	FL/Y	R	R	DW	DW	DW	DW	1
CHANGE	<b>←</b> R—	<b>←-</b> R	R	R	R-→	←R	<b>←</b> R—	R	R	R	R	R	Y	Υ	Υ	FL/R	FL/R	R	R	DW	DW	DW	DW	
FLASHING OPERATION	FL/ <del>←</del> R	FL/ <del>←</del> R	FL/Y	FL/Y	FL/Y	FL/ <del>←</del> R	FL/ <del>←</del> R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/Y	FL/Y	DARK	DARK	DARK	DARK	† <b>4</b>



WIRING KEY

A,B,C,D } 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

E.F.G.H } 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

- J STRANDED BARE COPPER GROUNDWIRE (NO. 6 AWG)
- EC ] EXISTING CABLE

<u>LEGEND</u>

+ - 3/4 IN. X 10 FT. GROUND



STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION

MD 2 (GOVERNOR RITCHIE HIGHWAY) AT EARLEIGH HEIGHTS ROAD /MAGOTHY BRIDGE ROAD PASADENA, MARYLAND

## GENERAL INFORMATION SHEET

SCALE NONE	DATE <u>OCT</u>	OBER 7, 2011 (	CONTRACT NO. AA185B5A
DESIGNED BY	NJM	COUNTY	ANNE ARUNDEL
DRAWN BY	NJM	LOGMILE	02000231.23
CHECKED BY	BSH	T.I.M.S. N	IO. <u>L136</u>
F.A.P. NO	N/A ·	_ T.O.D. NO	D
T.S. NO. 314KGI	SG-02	OF SG-02	SHEET NO. 7 OF 7

509 South Exeter Street 4th Floor Baltimore, Maryland 21202 (410) 662–7400

PLOTTED: Tuesday, October 04, 2011 AT 12:01 PM
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